

Bariatric Transport System



Bariatric Program

- A717 will be the prototype unit
- Additional units will be outfitted later
- Program should be implemented county-wide by end of CY2016

Deployment Plan

- The cache of equipment will be stored at the stations housing Rescue Squads.
- When a Bariatric Capable unit requires the equipment they will request it through ECC
- The dispatched Rescue Squad will place all bariatric equipment on their unit and respond.
- **An additional manpower piece will also be dispatched**
- Minimum manpower for a bariatric patient is 5 IECS certified personnel
- The Rescue Squad dispatched to assist will remain on the call and follow the transport unit to the hospital until patient transfer

Deployment Plan

- If the transport unit on scene is not Bariatric Capable they must request an appropriate Bariatric Capable transport unit

Equipment Required

- Winch
- Ramps
- Transition Plate
- Ferno Large Body Surface (LBS) board
- Cot tow ring harness

Additional Equipment

- Hoverjack system
- Hovermatt system
- Inflation Device
- Manta Rescue Aid
- BEAR-iatric Restraining Device
- BEAR-iatric Stair Chair Device

Safety Inspection

- ALL components of this system must be inspected for damage before use
- Any damaged equipment must not be used and placed Out Of Service
- Follow all manufacturer's recommendations

System Capacities

- Ramps

- 1400 pound rating (cot only rated to 1100 pounds)
- 10 feet long, 8 inches wide, 2 inches deep
- Weigh 40 pounds each

- Transition Plate

- 43" wide x 8" deep x 3/8" high
- Weighs 17 pounds

- Winch Box

- Pulling capacity of 2,500 pounds (cot only rated to 1100 pounds)
- Weighs 30 pounds
- 15 3/8" wide x 8-3/8" deep x 6" high
- Cable can extend 22 feet beyond rear of unit

General Considerations

- A minimum area of 40 feet by 14 feet is required
- Every attempt should be made to use a level surface
- Side to side leveling is equally important
- If you must park on a hill, always face DOWNHILL
- Keep all thread holes clean
- Avoid getting water in thread holes
- NEVER move the ambulance with the ramps attached

Stretcher Capacities

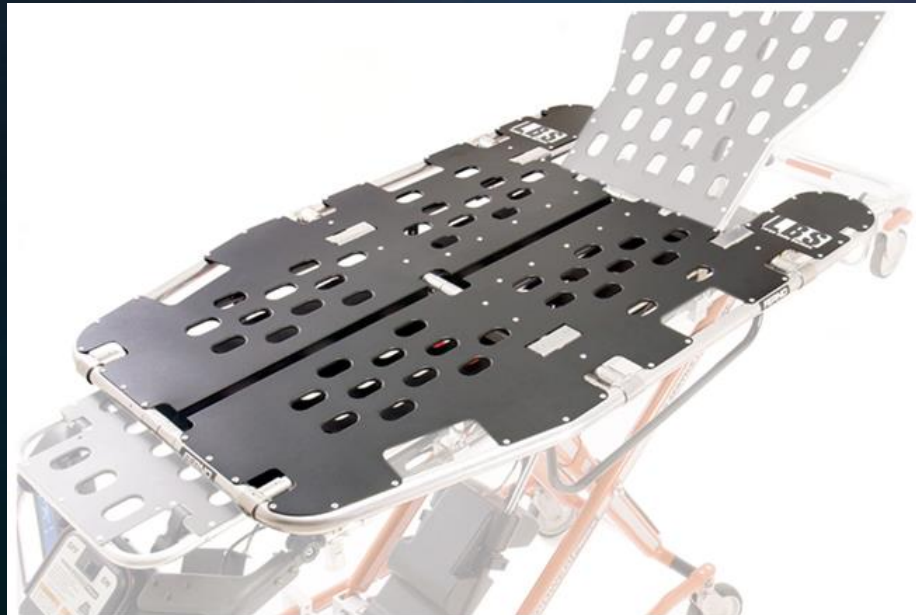
- The Ferno 35X Pro Flexx Cot will be the only cot to be used with the Bariatric System
- Ensure that the cot being used has the tow ring brackets and LBS mounts installed
- Rated at 700 pounds in the loading position and 1100 pounds in the lowest position.
- The cot **MUST** be in the lowest position for winching

Note: The Ferno 35X Pro Flexx cot can be found in colors other than red. Verify that the cot being used has been prepped for bariatric use.



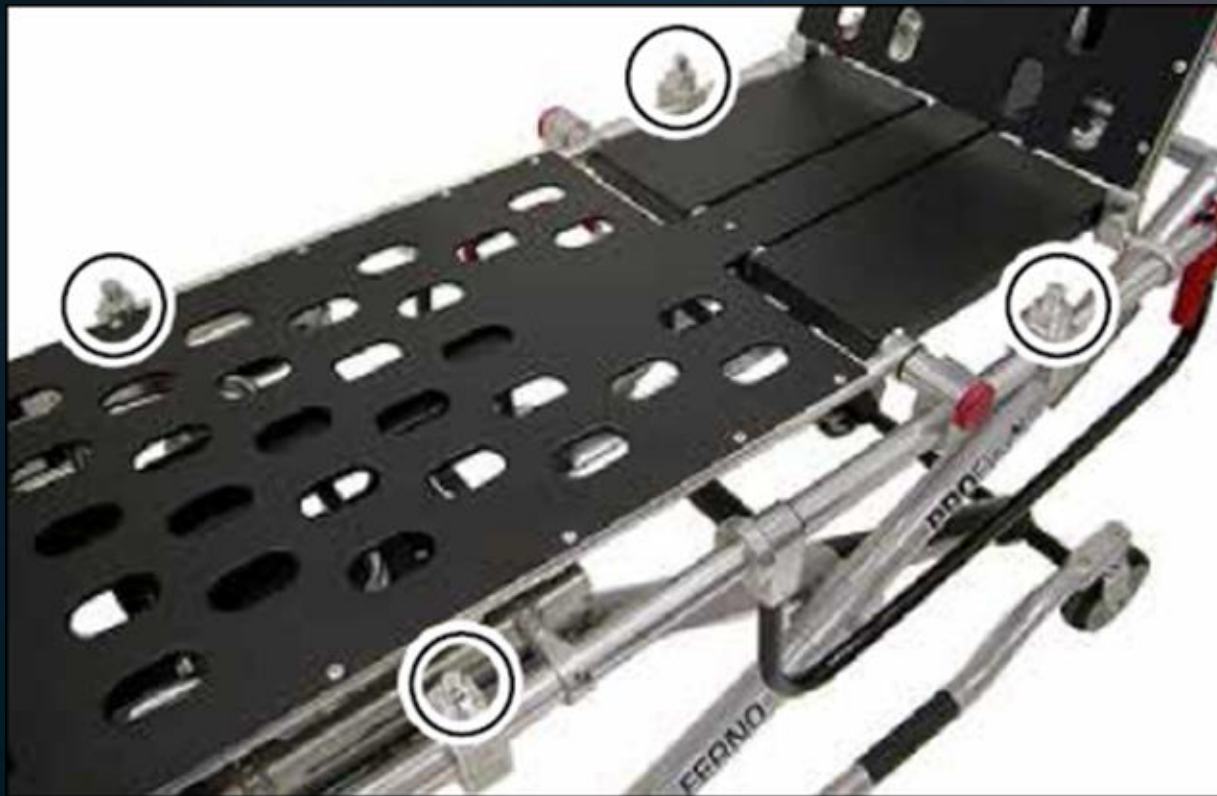
Ferno LBS System

- The Ferno Large Body System is designed to increase the width of the cot.
- It DOES NOT increase the weight rating of the cot.
- Only to be used with Ferno 35X Pro Flexx cot equipped with mounting brackets.
- Will arrive as part of the Bariatric Cache



Ferno LBS System

- A Bariatric Capable cot will have four LBS mounting blocks already attached to the cot frame



Ferno LBS System

- Begin by removing the mattress from the cot
- Remove the pins from the mounting points and lower the LBS board onto the blocks



Ferno LBS System

- Once all 4 mounting points are properly seated on the blocks ensure that all pins are in place.



Ferno LBS System

- Replace the cot lap belt with the bariatric lap belt provided by the rescue squad.
- All cot straps MUST remain attached to the main cot frame and not the LBS.
- Straps must wrap around the outside of the LBS

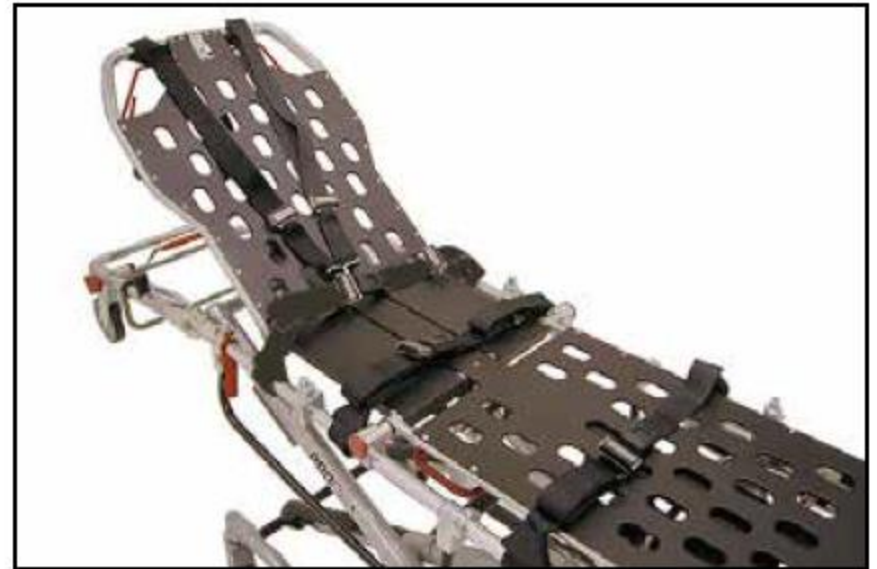


Ferno LBS System

USING RESTRAINT EXTENDERS

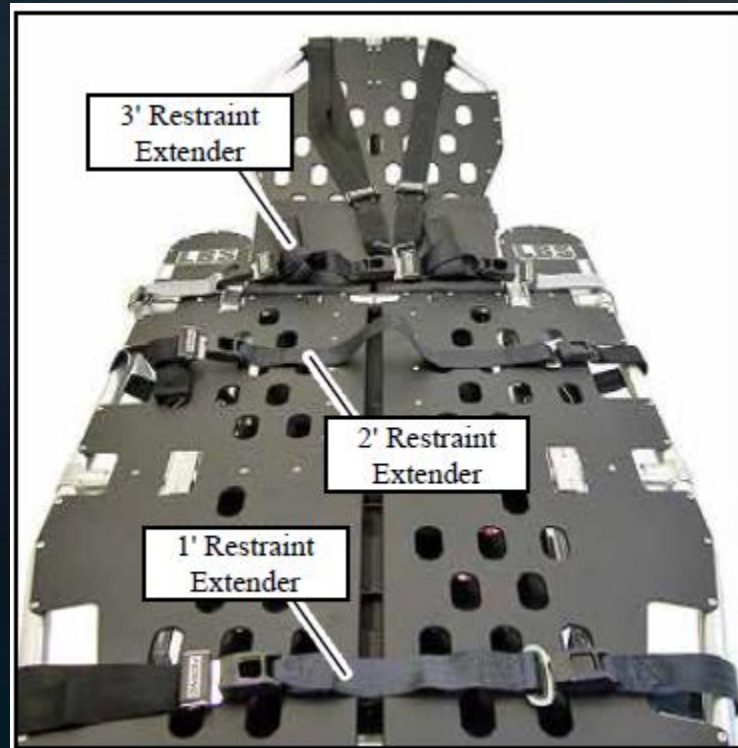
The restraint extenders are compatible with all Ferno® Model 430 metal buckle restraints. When using the restraint extenders:

1. Verify that your existing lap and leg restraints are attached to the cot main frame, and the existing harness shoulder straps are attached to the backrest.
2. Attach the bariatric board to the cot.
3. Wrap the lap and leg restraints around the main frame of the bariatric board (Figure 24 and 25).

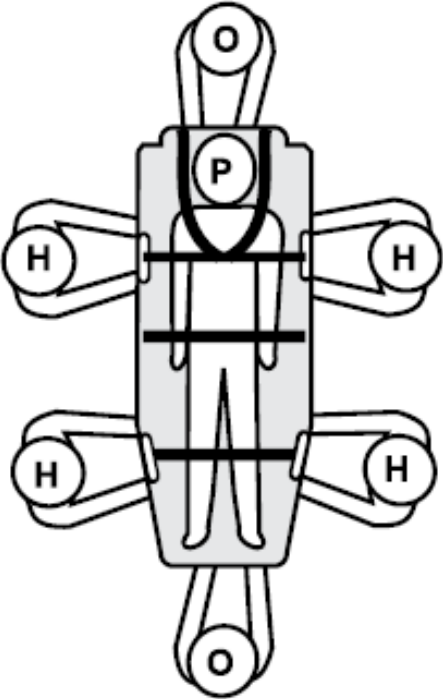
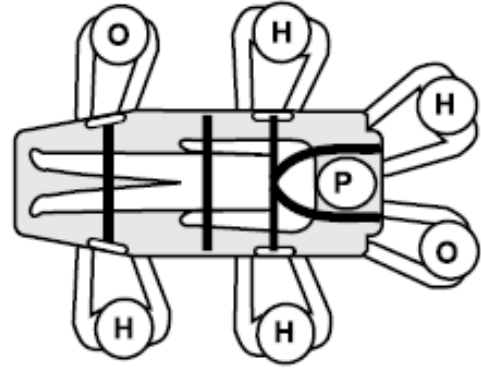
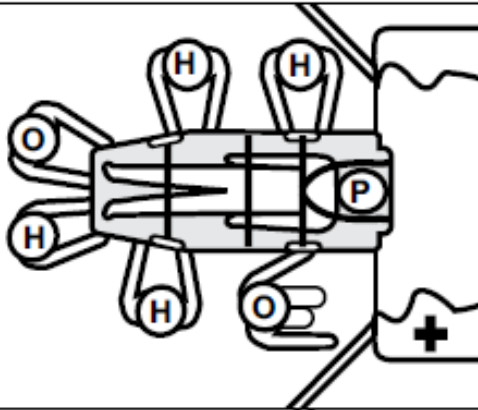
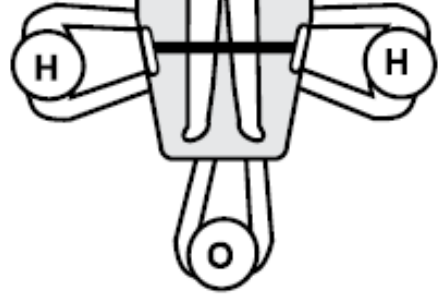
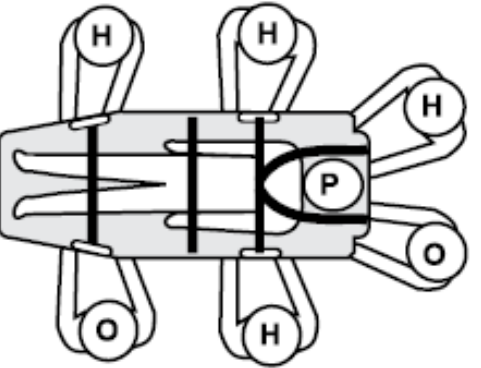
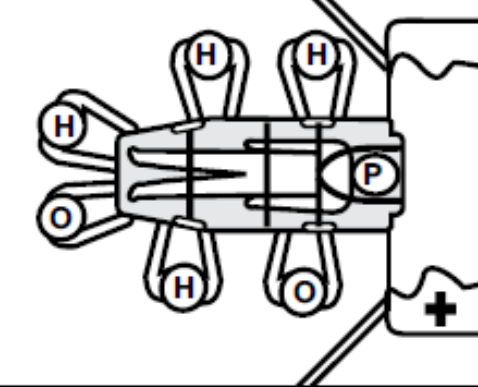


**Figure 23 - Attach Cot Restraints to the Main Frame
Using the New Lap Belt**

Ferno LBS System

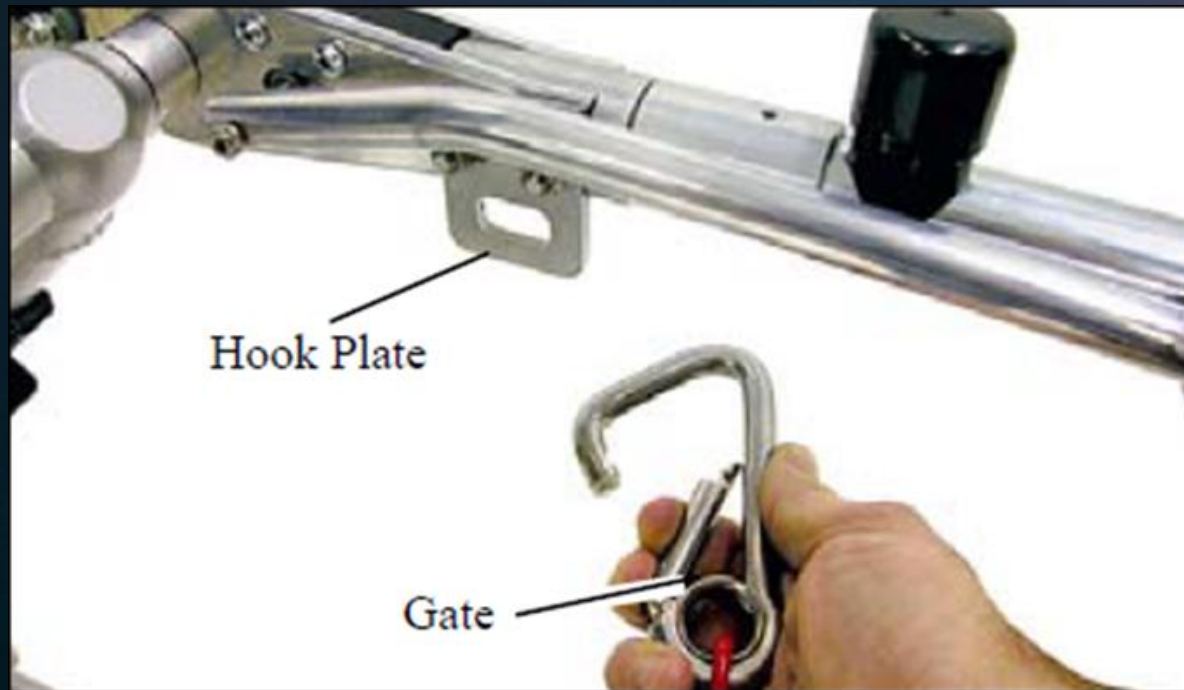


Ferno LBS System

COT	CHANGING LEVELS	ROLLING	LOADING/UNLOADING
X-Frame Cots (35P, 35X, POWERFlexx Series)	 <p>A top-down diagram of an X-Frame cot. The main frame is a central rectangle with a horizontal bar across the middle. Two 'wings' extend from the sides. At the head end, there is a circular control handle labeled 'P'. At the foot end, there is a circular control handle labeled 'O'. The cot is shown in a vertical orientation.</p>	 <p>A top-down diagram of an X-Frame cot in a rolling position. The cot is oriented horizontally. The head end is on the left, and the foot end is on the right. The control handle 'P' is at the head end, and 'O' is at the foot end. The cot is shown in a vertical orientation.</p>	 <p>A top-down diagram of an X-Frame cot in a loading/unloading position. The cot is oriented horizontally. The head end is on the left, and the foot end is on the right. The control handle 'P' is at the head end, and 'O' is at the foot end. The cot is shown in a vertical orientation. A control handle with a '+' sign is visible on the right side.</p>
H-Frame Cots (93P, and 93H Series)	 <p>A top-down diagram of an H-Frame cot. The main frame is a central rectangle with a horizontal bar across the middle. Two 'wings' extend from the sides. At the head end, there is a circular control handle labeled 'P'. At the foot end, there is a circular control handle labeled 'O'. The cot is shown in a vertical orientation.</p>	 <p>A top-down diagram of an H-Frame cot in a rolling position. The cot is oriented horizontally. The head end is on the left, and the foot end is on the right. The control handle 'P' is at the head end, and 'O' is at the foot end. The cot is shown in a vertical orientation.</p>	 <p>A top-down diagram of an H-Frame cot in a loading/unloading position. The cot is oriented horizontally. The head end is on the left, and the foot end is on the right. The control handle 'P' is at the head end, and 'O' is at the foot end. The cot is shown in a vertical orientation. A control handle with a '+' sign is visible on the right side.</p>
Notes:	<p>Position operators at head and foot ends to work the controls. Helpers lift using the cot main frame and bariatric board main frame, not the wings.</p>	<p>Position the foot-end operator nearest the cot control handle.</p>	<p>All cots: Foot-end operator stands at the side with the control handle and works the control.</p> <p>35P, 35X: Head-end operator kneels and lifts/lowers the undercarriage (POWERFlexx: in manual mode only).</p>

Ferno Tow Ring System

- A Bariatric Capable cot uses a Ferno Tow Ring System as the attachment point for the winch
- The cot will have the hook plates permanently installed as seen below



Ferno Tow Ring System

- Pass the carabiners through the guide bracket at the head end of the cot

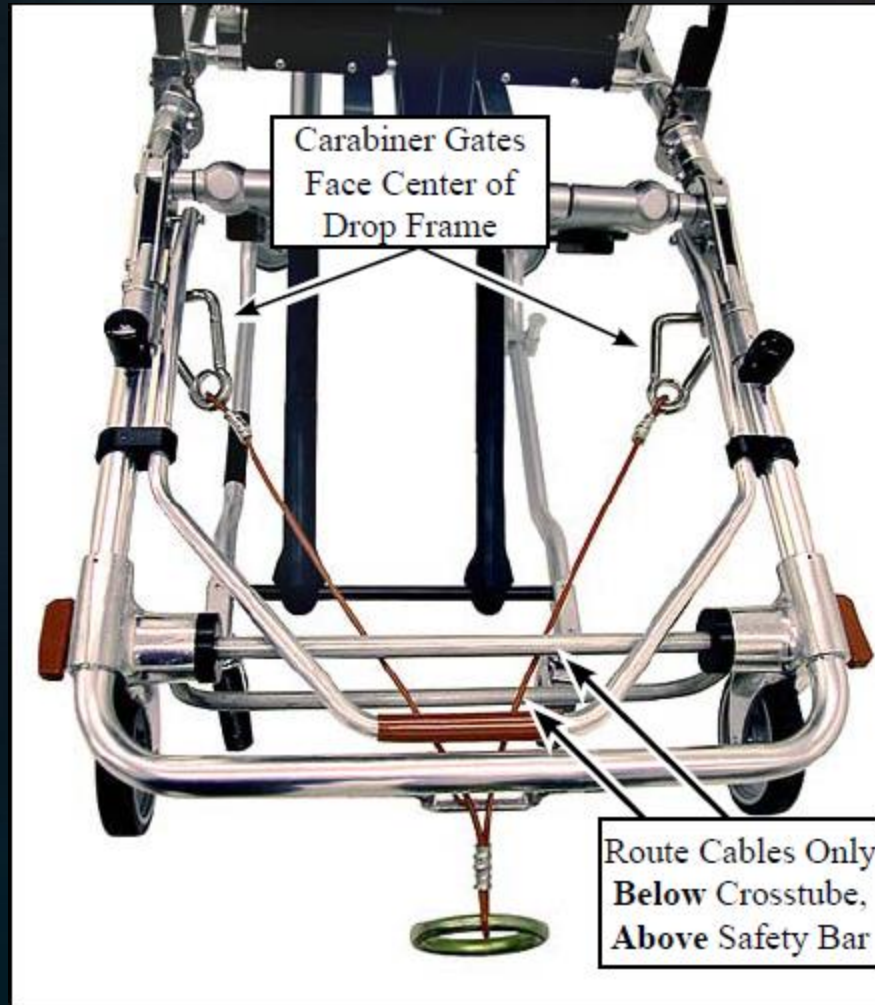


Ferno Tow Ring System

- Ensure carabiner gates face the inside of the cot



Ferno Tow Ring System



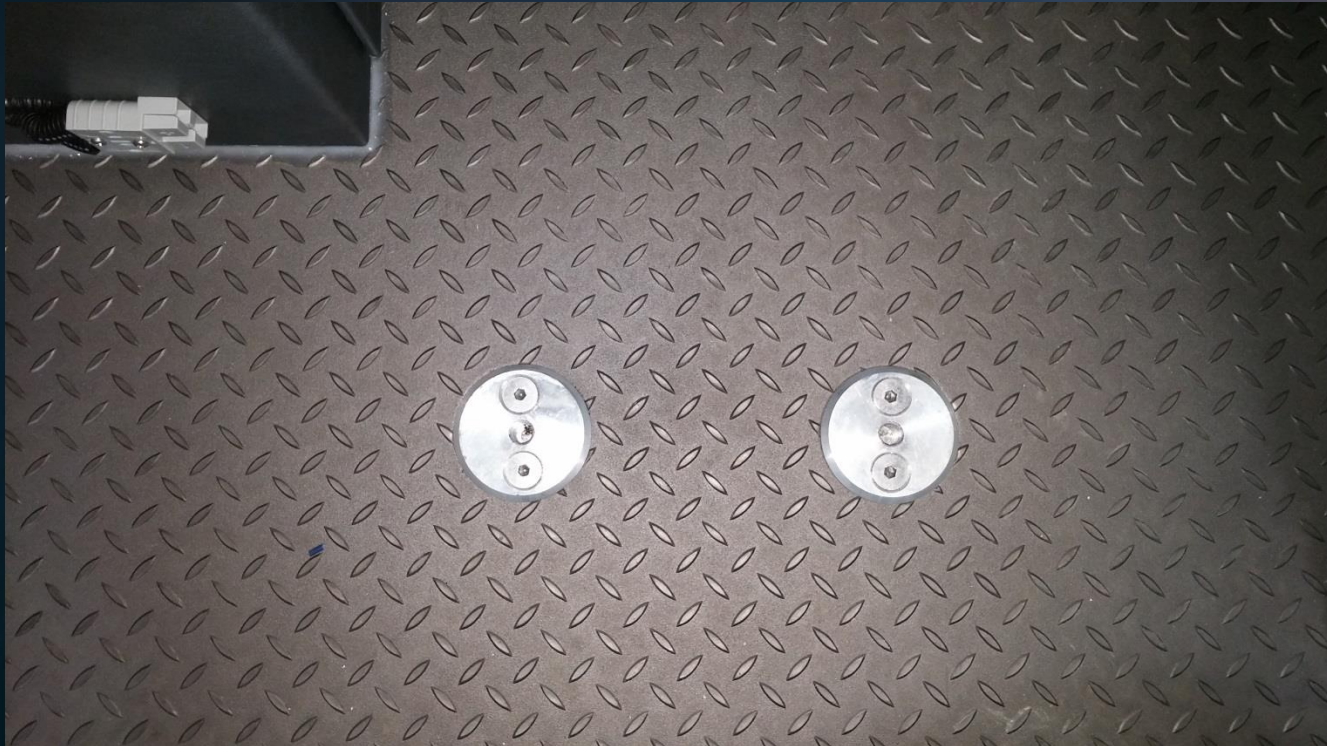
Winch Installation

- Warn XT25 winch mounted in a box
- 2500 pound pulling capacity
- Winch can remain in place during patient transport



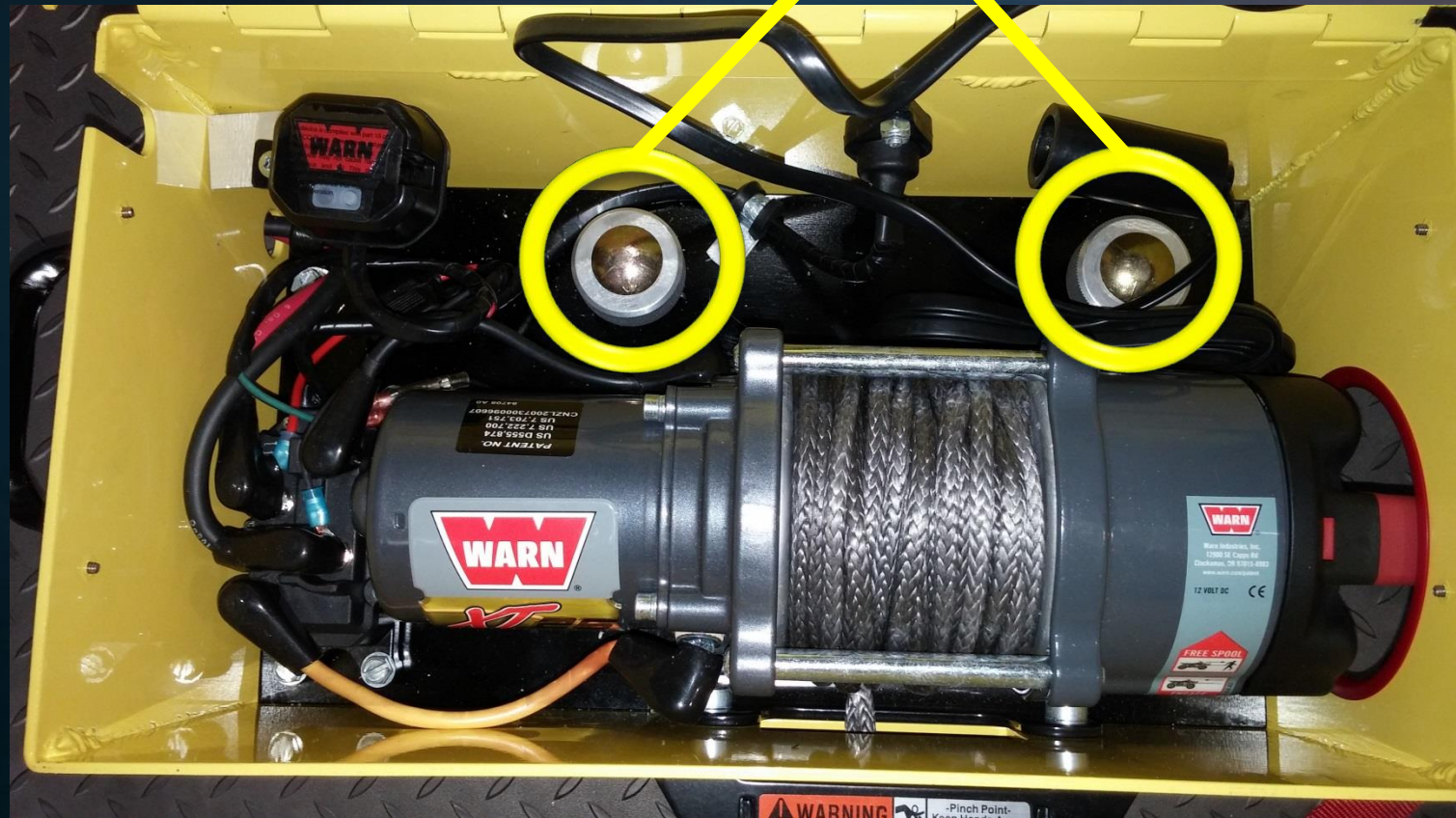
Winch Installation

- Two floor mounts can be found forward of the Captain's Chair
- These mounts are for the Winch Box



Winch Installation

- Align winch box holes with floor mount holes
- Secure winch box with thumb screws



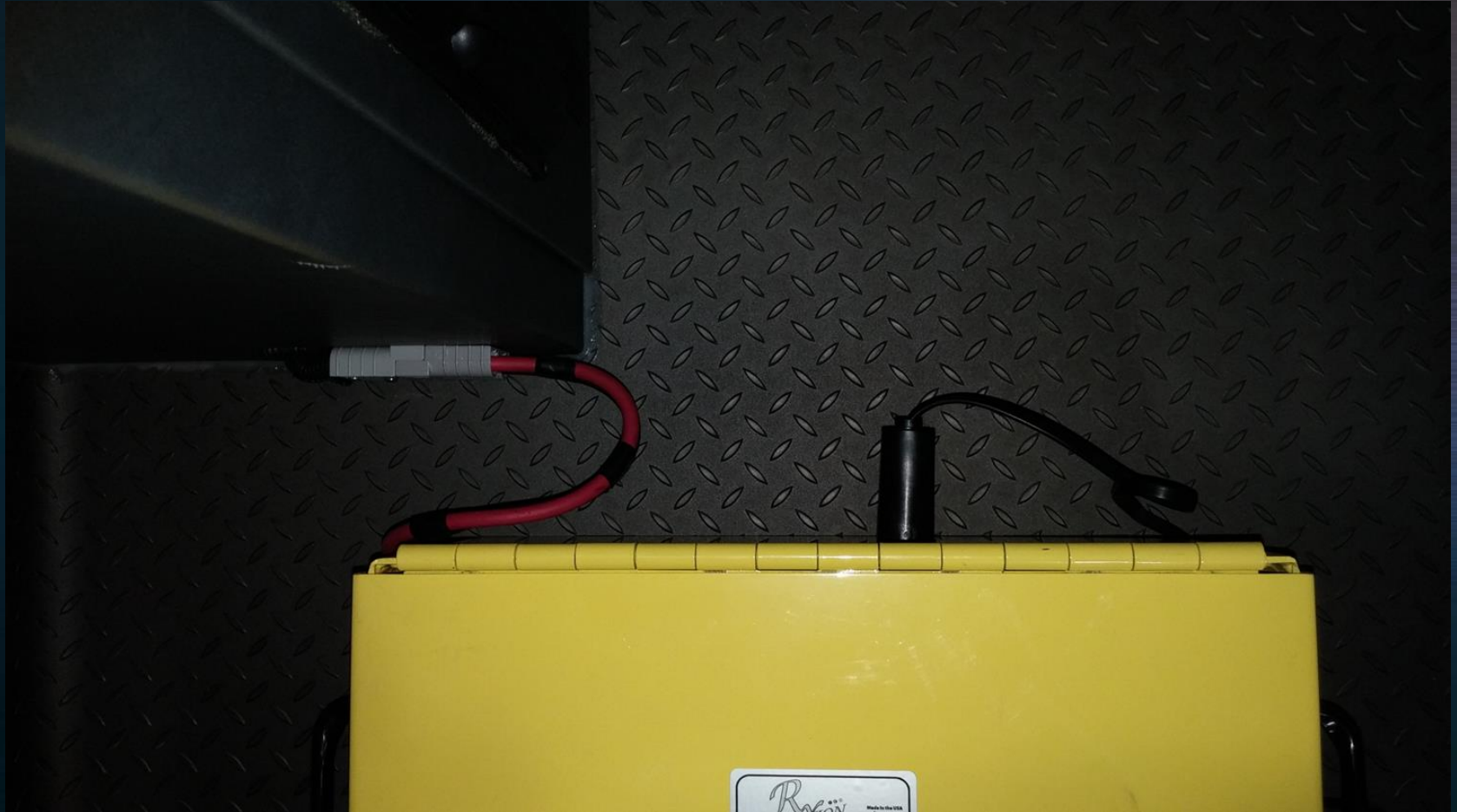
Winch Installation

- Plug in power cord to receiver mounted on cabinet in front of captain's chair



Winch Installation

- Plug in controller on rear of winch box



Winch Installation

- Place winch in Free Wheel mode and pull cable under captain's chair

Engaged



Free Wheel



Winch Installation



Winch Installation

- Cable should ALWAYS be routed OVER antlers



Winch Installation

- If the winch has no power, check the breaker in the bottom of this compartment



Winch Installation

Tripped



Reset the breaker by pressing the switch towards the front of the unit. This will close the circuit and the winch should have power.

Reset



Transition Plate Information

- Lightweight, removable aluminum plate
- Used to create an easy transition from the ramps to the ambulance floor
- Held in place by 2 thumb screws
- Ramps hook on hanger rods
- Has roller for winch cable



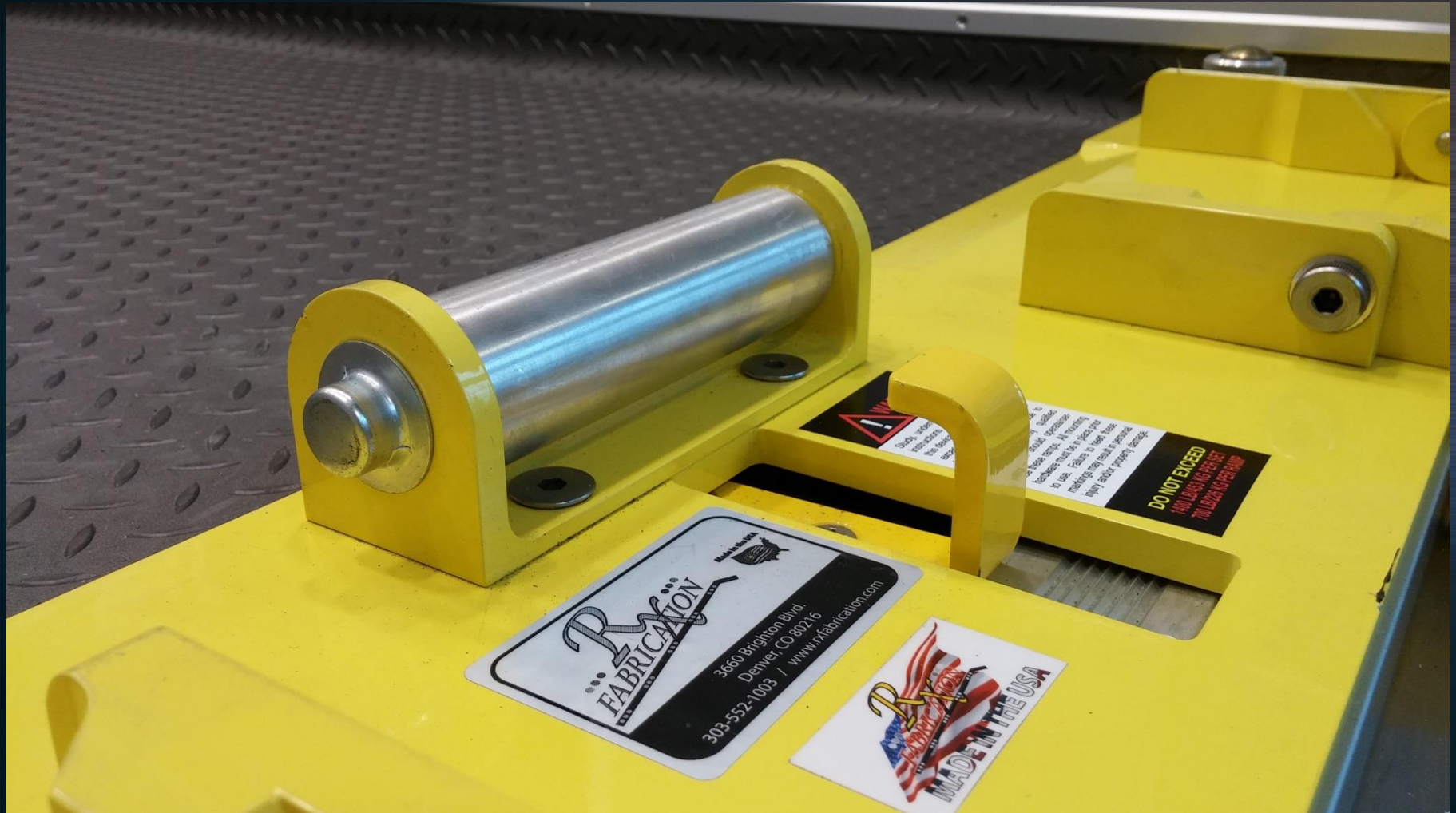
Transition Plate Information

- Verify that spacers are on outside of hanger rods



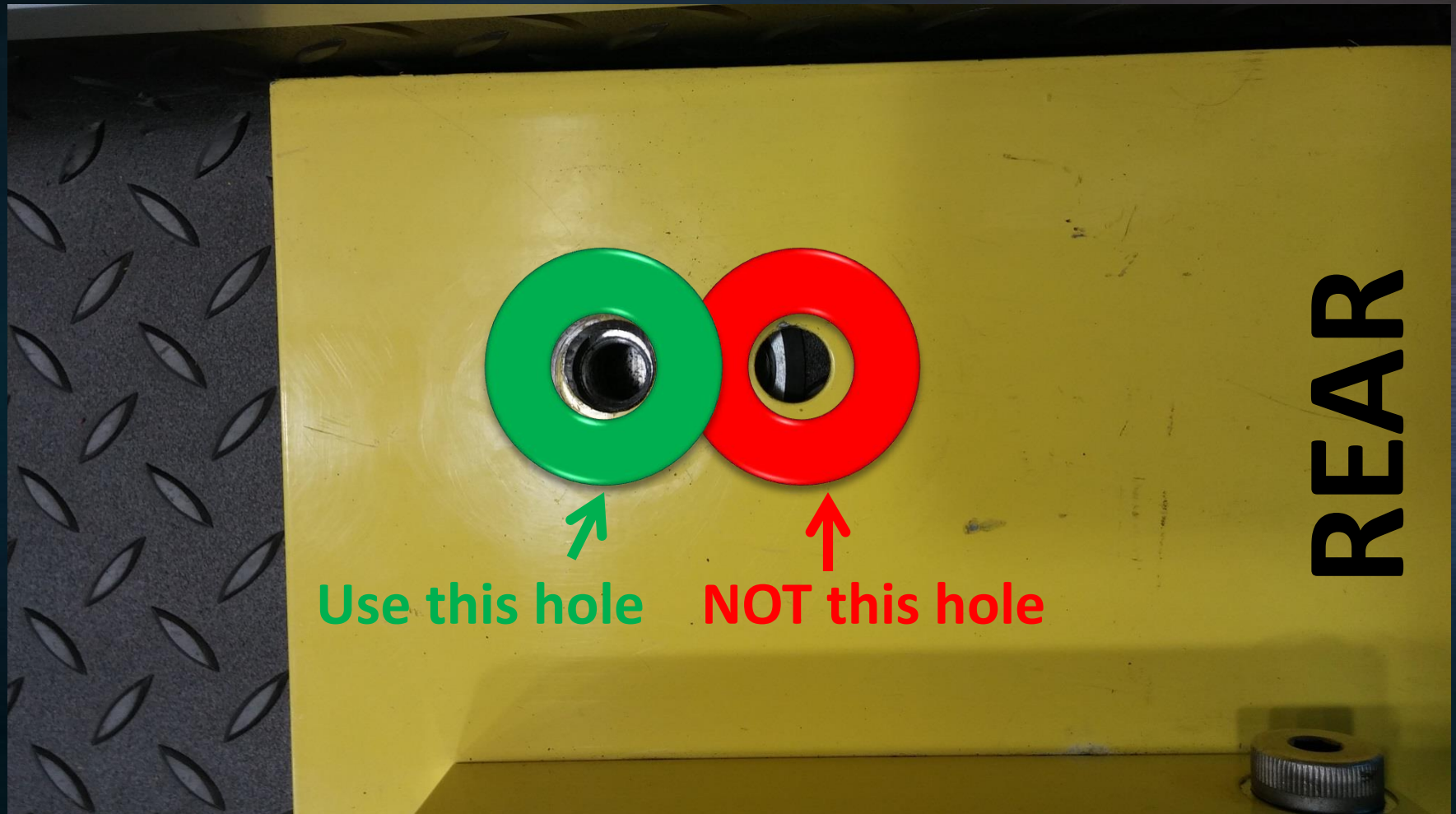
Transition Plate Installation

- Lay transition plate over safety hook at rear of unit



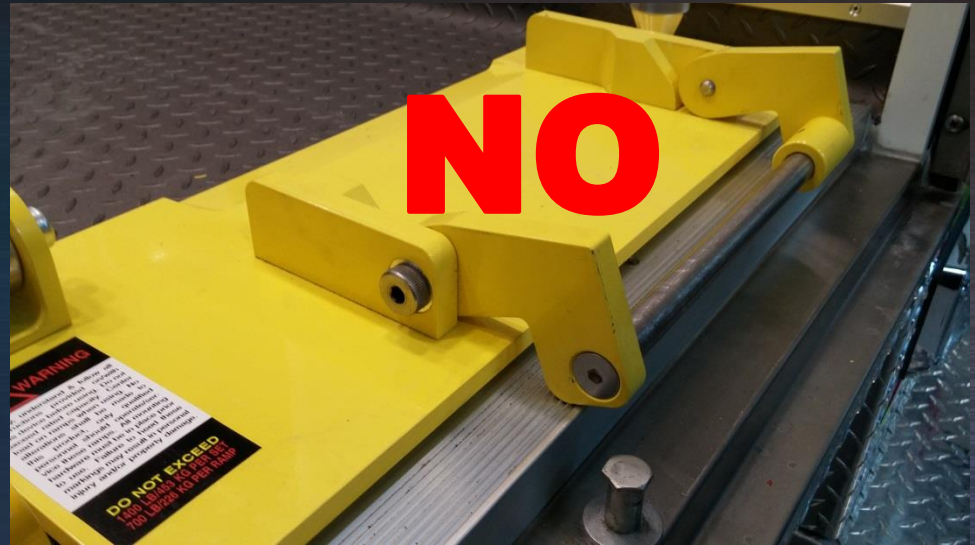
Transition Plate Installation

- Align plate over mounting pods



Transition Plate Installation

- If hanger rods do not lay in sill plate next to nader bolts the transition plate is not properly installed



Transition Plate Installation

- Tighten fasteners until hand tight (DO NOT USE TOOLS)



Ramp Installation

- Folded Dimensions:
 - 5 feet Long, 8 inches Wide, and 8 inches Deep
- Deployed Dimensions:
 - 10 feet Long, 8 inches wide, 2 inches Deep deployed
- Hinges are pinch points and marked **RED**
- Ensure Rear Airbag system is dumped to lower ramp angles.

Ramp Installation

- Begin by standing ramps, hinge up, approximately 10 feet behind transport unit
- Ensure slotted groove is closest to unit
- Separate ends of ramps 1 to 2 feet as seen here
- Pick up groove end and walk towards unit
- Secure groove in plate hanger
- Lifting ground end will easily seat ramps on hanger



Ramp Installation



Left Side

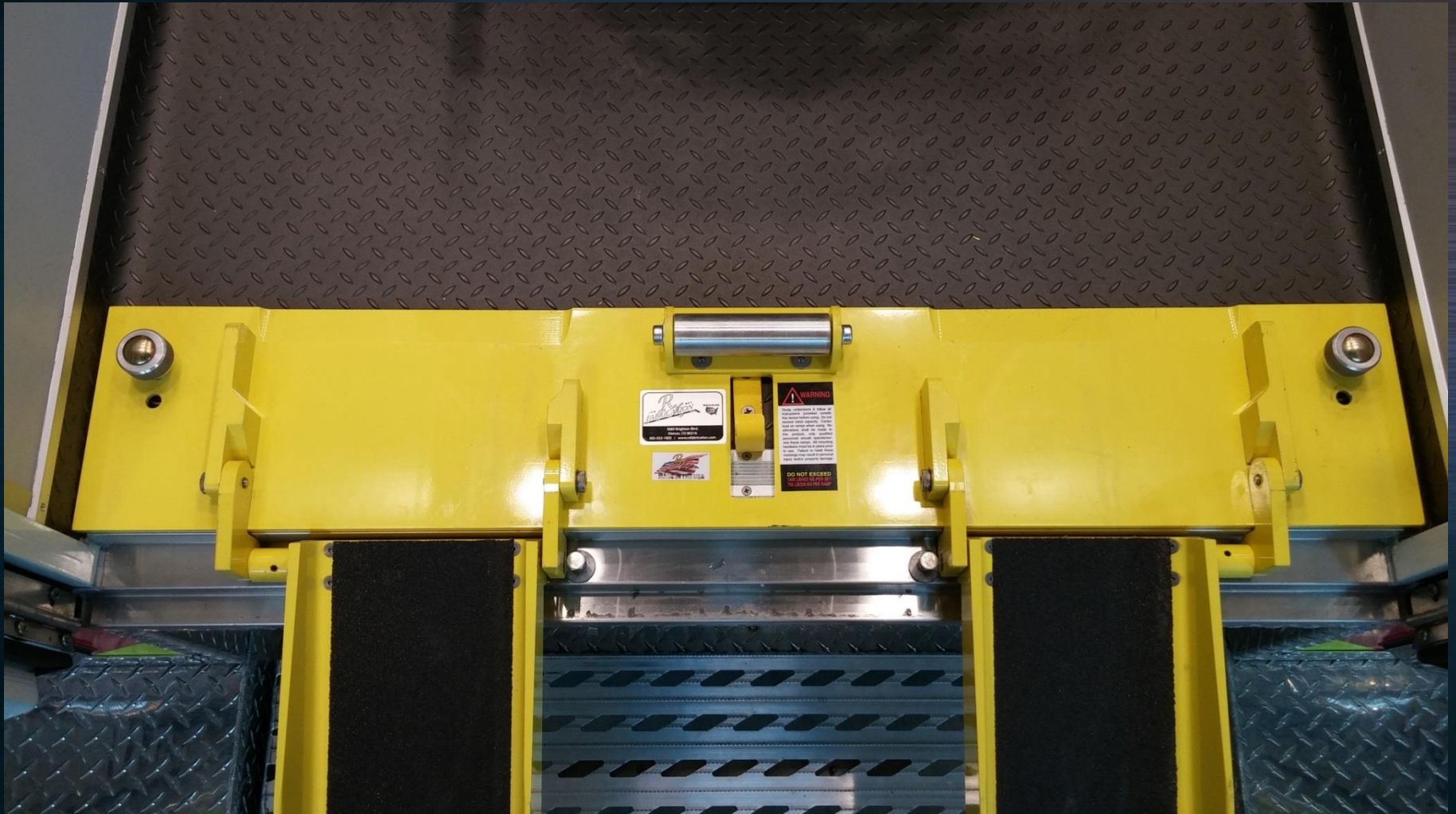


Right Side



Ramp Installation

- Ready for use

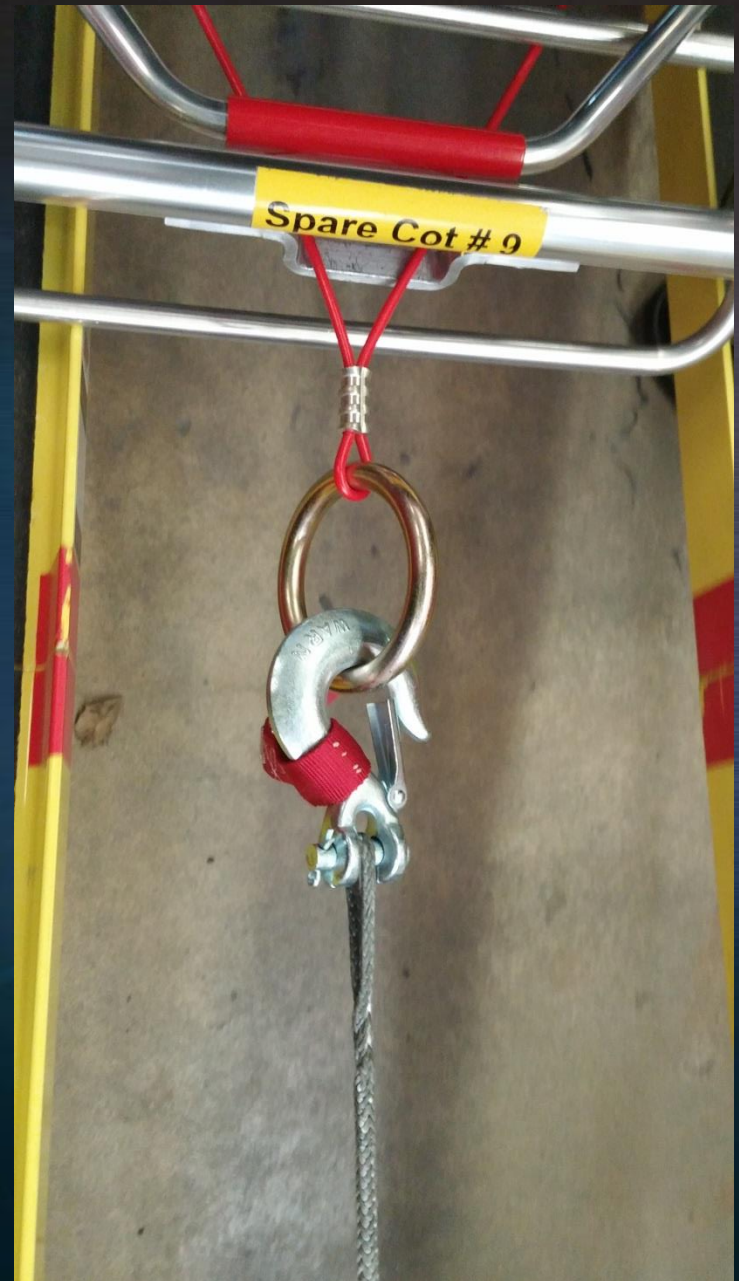


Ramp Installation

- Ramps can be used to bridge landings, loading docks, patios, etc
- Landing MUST be lower than transport unit floor
- Ramps must be parallel and level to prevent stretcher from tilting

Attachment Point

- The winch hook attaches directly to the Tow Ring
- Ensure Tow Ring Cables are not twisted
- Ensure gate on hook is closed



Winching Operation

- One person must be designated as the overall safety/control officer
- All safe winching actions should be adhered to when winching patient into transport unit

The Winch Operator

- The winch operator **MUST** step out of the curb door to operate the control and watch the operation
- **WATCH** the cable's path during winching
- **LISTEN** to those guiding the stretcher



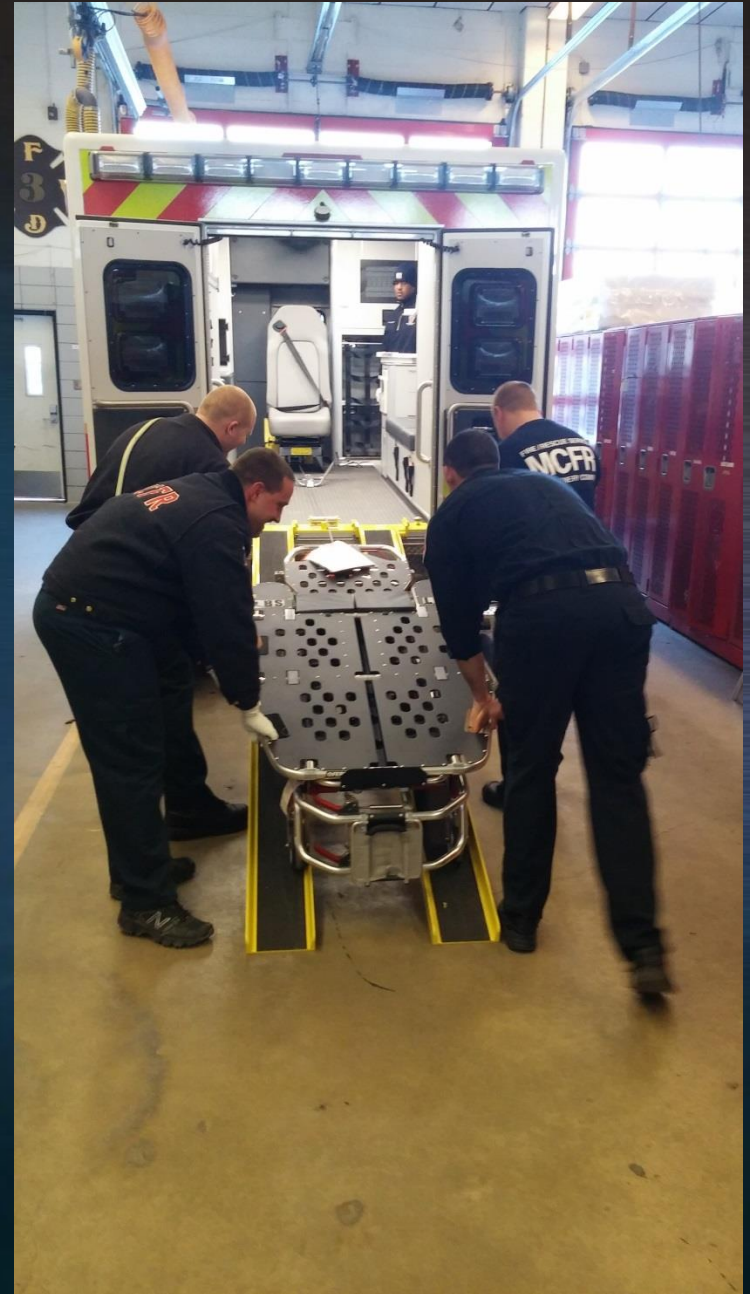
Winching Operation

- Ensure that winch cable remains on roller



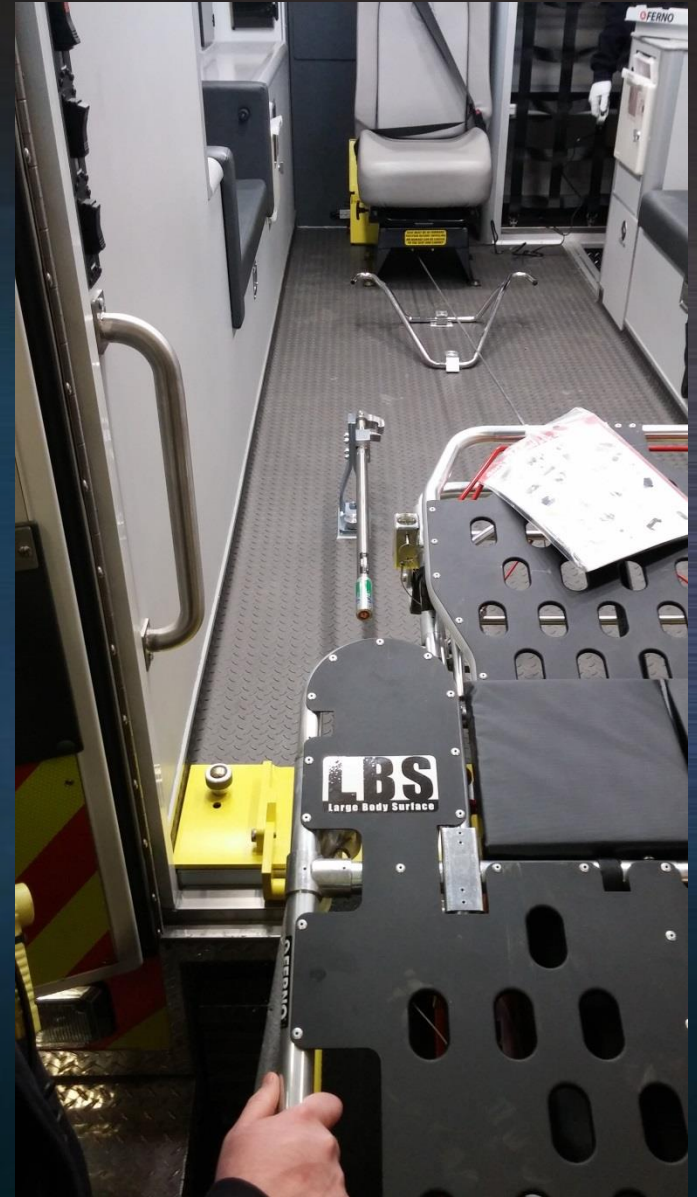
Winching Operation

- NO personnel can occupy the action area between the stretcher and the winch during operations
- No personnel should be positioned at the foot end of the stretcher
- AT LEAST one person should be positioned at EACH side of the stretcher during winching



Winching Operation

- As the cot transitions to the EMS unit floor it has a tendency to shift towards the left side of the unit
- The crew member on the left side must watch this and adjust the cot accordingly



Winching Operation

- Ensure that the loading wheel does not end up between the wall and cot fastener



Winching Operation

- As the loading wheels near the antlers, the winch operator must avoid winching against them
- The winch can stay attached to the tow ring during transport if desired

Need picture of head of cot
in antlers with winch
attached to tow ring

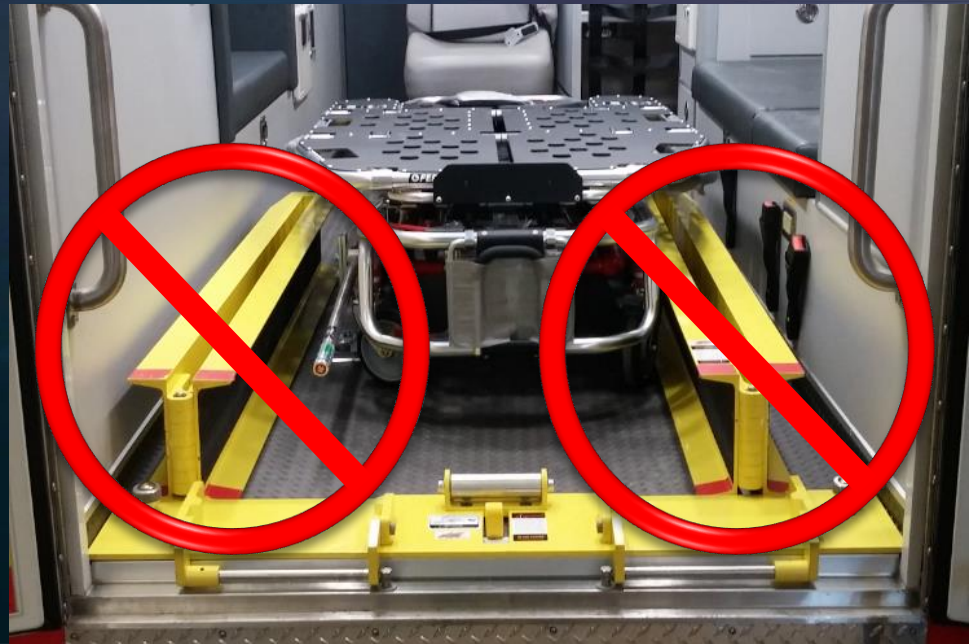
Patient Transport

- If the LBS system is used there is only a few inches of clearance on each side of the cot



Patient Transport

- The Winch and Transition Plate can remain in the unit during patient transport
- The hangers must be flipped up before the rear doors are closed
- NEVER transport the ramps in the patient compartment while loaded with patient



Patient Unloading

- The Rescue Squad used to load the patient should also report to the hospital with the transport unit to assist with unloading
- The winch should also be used to bring the patient out of the unit
- All personnel should be placed in the same locations as patient loading

Patient Unloading

- Ensure that the winch cable is attached to the tow ring
- Release the cot latch and begin to remove the cot as usual
- The winch operator should simultaneously be winching out as the cot is removed
- Continue a controlled descent until the cot is completely on the ground and clear of the ramps

Patient Unloading

- When unloading the patient the safety bar will not catch on the safety hook due to the ramp angle and roller configuration

